

REMARKS

The Examiner has required restriction of the claims of the above-identified application among five groups as follows:

Group I: claims 1, 3-4, 6, 7 and 9-12, directed to a composition comprising apo-carbonic anhydrase and a "first set" of photoluminescent compounds;

Group II: claims 1, 3-4, 6, 7 and 9-12, directed to a composition comprising a reaction product of apo-carbonic anhydrase and a "second set" of photoluminescent compounds;

Group III: claims 2, 5, 8 and 13, directed to a composition comprising apo-carbonic anhydrase and a "third set" of photoluminescent compounds;

Group IV: claims 14-22 and 24, directed to a "process" and a kit to identify a divalent metal ion; and

Group V: claim 23, directed to "another kit" to assay a divalent metal ion comprising an apo carbonic anhydrase protein, a photoluminescent molecule, a chelating agent and a buffer.

Restriction traversed

Applicants hereby traverse the restriction requirement as drawn. Applicants submit that at least the claims of Groups I, II and IV should be examined together and the claims of Groups III and V should be examined together.

First, the Examiner incorrectly divides claims 1, 3-4, 6, 7 and 9-12 into two groups. There are not a "first set" and "second set" of compounds recited in these claims. The compositions set forth in original claim 1 (and claims dependent thereon) are either a mixture of a compound with apo-carbonic anhydrase, or the covalent reaction product that is formed when these compounds react with the apo-CA at a cysteine residue or via other conjugation as described in the specification. This is a unitary invention. Claims 14-22 recite a kit comprising the composition of claim 1 (see item i) in claim 14) and other optional components. Group IV is thus unitary with Groups I and II.

Claim 14 is amended so that the item i) of the recited kit can be either the conjugated apo-CA:photoluminescent molecule, or the apo-CA and photoluminescent molecule as separate reagents. Applicants submit that these alternate embodiments still represent a unitary invention and restriction among them is not justifiable.

Similarly, claim 23 is directed to a kit comprising the composition of claim 2 (see items i) and ii)) and other optional components. Group V is thus unitary with Group III.

Applicants further submit that no undue burden of search is imposed by search of claims 14-22 together with claims 1, 3-4,

6, 7 and 9-12 or of claim 23 together with claims 2, 5, 8 and 13.

For all of the above reasons, the restriction requirement should be redrawn as Applicants propose.

**Election of group**

To provide a complete response to the restriction requirement, Applicants hereby elect the claims of group III, claims 2, 5, 8 and 13, for prosecution in the present application, or the claims of Groups III and V (claims 2, 5, 8, 13 and 23) if the Examiner agrees to redraw the restriction requirement.

**Election of species**

The Examiner has further required an election of species. Applicants hereby elect the species 7-fluoro-benz-2-oxa-1,3-diazole-4-sulfonamide: $\beta$ -mercaptoethanol adduct (ABD-M) for initial examination. This election is made with the understanding that if the Examiner finds no prior art to apply against the claims to this species, the Examiner will select a second species for further search, with an eye toward determining patentability of the generic claim.

Claims 2, 5, 8, 13 and 23 all read upon the elected species.

Applicants submit that the present application well describes and claims patentable subject matter. The favorable action of withdrawal of the standing rejections and allowance of the application is respectfully requested.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Mark J. Nuell (Reg. No. 36,623) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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